

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method for enforcing a plurality of different policies on a stream of packets, the method comprising:

receiving a packet;

appending an extension to the packet;

determining session information regarding the packet;

updating the extension with the session information;

forwarding the packet to a packet policy rule engine module;

determining, at the packet policy rule engine module, whether the packet corresponds to a

common condition for a first policy rule and a second policy rule, the first policy

rule belonging to a first policy type and the second policy rule belonging to a

second policy type that differs from the first policy type; ~~and~~

providing, at the packet policy rule engine module, an association between the first

packet and the common condition where it is determined that the packet

corresponds to the common condition; and

updating the extension with the association.

2. (Currently Amended) The method of claim 1, further comprising:

~~appending an extension to the packet and updating at least a first bit location in the~~

~~extension to provide the association between the packet and the common~~

~~condition.~~

forwarding the packet to an application decode engine module;

determining, at the application engine decode module, whether the packet corresponds to an application rule;

if the packet corresponds to an application rule, at the application engine decode module, updating the extension with application information from the application rule; and wherein said forwarding the packet to a packet policy rule engine module includes forwarding the packet from the application engine decode module to a packet policy rule engine module.

3. (Original) The method of claim 1, further comprising:
determining whether the packet corresponds to a first particular condition for the first policy rule as compared to the second policy rule; and
determining applicability of the first policy rule to the packet where it is determined that the common condition and the first particular condition correspond to the packet.

4. (Currently Amended) The method of claim 1 ~~3~~, further comprising:
~~appending an extension to the packet;~~
~~updating at least a first bit location in the extension to provide the association between the packet and the common condition; and~~
~~updating at least a second bit location in the extension to provide the association between the packet and the first particular condition.~~
, wherein said appending an extension to the packet occurs at an extension builder module.

5. (Original) The method of claim 3, wherein determining applicability of the first policy rule to the packet comprises:

traversing a rule tree corresponding to the first policy rule, the rule tree having a first path corresponding to the first rule, the first path including the common condition and the first particular condition, wherein presence of the common condition and the first particular condition prompts a determination that the first policy rule is applicable to the packet.

6. (Original) The method of claim 1, wherein the first policy type is a firewall policy and the second policy type is a quality of service policy.

7. (Original) The method of claim 1, wherein the first and second policy types are selected from the following policy types: firewall, quality of service, intrusion detection.

8. (Currently Amended) The method of claim 4 ~~1~~, ~~further comprising:~~
~~creating a session for a plurality of session-related packets including the packet; and~~
~~determining whether the packet corresponds to the common condition as evidenced from~~
~~the created session.~~
wherein said determining session information regarding the packet and said
updating the extension with the session information occur at a session manager
module.

9-13. (Canceled).

14. (Currently Amended) An apparatus for enforcing a plurality of different policies on a stream of packets, the apparatus comprising:

means for receiving a packet;

means for appending an extension to the packet;

means for determining session information regarding the packet;

means for updating the extension with the session information;

means for forwarding the packet to a packet policy rule engine module;

means for determining, at the packet policy rule engine module, whether the packet corresponds to a common condition for a first policy rule and a second policy rule, the first policy rule belonging to a first policy type and the second policy rule belonging to a second policy type that differs from the first policy type; and
means for providing, at the packet policy rule engine module, an association between the first packet and the common condition where it is determined that the packet corresponds to the common condition; and
means for updating the extension with the association.

15. (Currently Amended) The apparatus of claim 14, further comprising:

~~means for appending an extension to the packet and updating at least a first bit location in the extension to provide the association between the packet and the common condition;~~ forwarding the packet to an application decode engine module;
means for determining, at the application engine decode module, whether the packet corresponds to an application rule;
means for, if the packet corresponds to an application rule, at the application engine

decode module, updating the extension with application information from the application rule; and

wherein said means for forwarding the packet to a packet policy rule engine module includes means for forwarding the packet from the application engine decode module to a packet policy rule engine module.

16. (Original) The apparatus of claim 14, further comprising:

means for determining whether the packet corresponds to a first particular condition for the first policy rule as compared to the second policy rule, determining applicability of the first policy rule to the packet where it is determined that the common condition and the first particular condition correspond to the packet.

17. (Currently Amended) The apparatus of claim ~~14~~ 16, further comprising:

~~means for appending an extension to the packet, updating at least a first bit location in the extension to provide the association between the packet and the common condition, and updating at least a second bit location in the extension to provide the association between the packet and the first particular condition.~~

, wherein said means for appending an extension to the packet builder includes an extension builder module.

18. (Original) The apparatus of claim 16, wherein determining applicability of the first policy rule to the packet comprises traversing a rule tree corresponding to the first policy rule, the rule tree having a first path corresponding to the first rule, the first path including the common

condition and the first particular condition, wherein presence of the common condition and the first particular condition prompts a determination that the first policy rule is applicable to the packet.

19. (Original) The apparatus of claim 14, wherein the first policy type is a firewall policy and the second policy type is a quality of service policy.

20. (Original) The apparatus of claim 14, wherein the first and second policy types are selected from the following policy types: firewall, quality of service, intrusion detection.

21. (Currently Amended) The apparatus of claim 17 14, ~~further comprising:~~
~~means for creating a session for a plurality of session related packets including the~~
~~packet, and determining whether the packet corresponds to the common condition~~
~~as evidenced from the created session.~~
wherein said means for determining session information regarding the packet and said
means for updating the extension with the session information include a session manager
module.

22-26. (Canceled)

27. (Currently Amended) An apparatus for enforcing a plurality of different policies on a stream of packets, the apparatus comprising:

an extension builder module configured to receive a packet, appending an extension to

the packet, and forward the packet to a session manager module;

said session manager module configured to receive the packet, determine session

information regarding the packet, update the extension with the session

information, and forward the packet to an application decode engine module;

said application decode engine module configured to determine if the packet corresponds

to an application rule, update the extension with application information from the

application if the packet corresponds to an application rule, and forward the

packet to a packet policy rule engine module; and

said packet policy rule engine module configured to determine whether the packet

corresponds to a common condition for a first policy rule and a second policy rule,

the first policy rule belonging to a first policy type and the second policy rule

belonging to a second policy type that differs from the first policy type, provide an

association between the first packet and the common condition where it is

determined that the packet corresponds to the common condition, and update the

extension with the association.

~~an infrastructure packet processing module group, which receives a packet; determines~~

~~whether the packet corresponds to a common condition for a first policy rule and a~~

~~second policy rule, the first policy rule belonging to a first policy type and the~~

~~second policy rule belonging to a second policy type that differs from the first~~

~~policy type, and provides an association between the first packet and the common~~

~~condition where it is determined that the packet corresponds to the common~~

~~condition.~~

28. (Canceled)

29. (Currently Amended) The apparatus of claim 27, wherein said packet policy rule engine module is further configured to:

determine whether the packet corresponds to a first particular condition for the first policy rule as compared to the second policy rule; and

determine applicability of the first policy rule to the packet where it is determined that the common condition and the first particular condition correspond to the packet.

~~further comprising:~~

~~a first policy processing module, in communication with the infrastructure packet~~

~~processing module group, which determines whether the packet corresponds to a~~

~~first particular condition for the first policy rule as compared to the second policy~~

~~rule, and determines applicability of the first policy rule to the packet where it is~~

~~determined that the common condition and the first particular condition~~

~~correspond to the packet.~~

30. (Canceled).

31. (Currently Amended) The apparatus of claim 29, wherein the packet policy rule engine module is further configured to traverse ~~determining applicability of the first policy rule to the packet comprises traversing~~ a rule tree corresponding to the first policy rule, the rule tree having a first path corresponding to the first rule, the first path including the common condition and the first particular condition, wherein presence of the common condition and the first particular

condition prompts a determination that the first policy rule is applicable to the packet.

32. (Original) The apparatus of claim 27, wherein the first policy type is a firewall policy and the second policy type is a quality of service policy.

33. (Original) The apparatus of claim 27, wherein the first and second policy types are selected from the following policy types: firewall, quality of service, intrusion detection.

34-39. (Canceled).